

## REMARKS

Claims 1-82 were pending in this application. Claims 1-33 and 50-82 have been canceled without prejudice and new claims 83-88 have been added. Accordingly, upon entry of this amendment, claims 34-49 and 83-88 will be pending.

Support for the claim amendments and the new claims presented herein may be found throughout the specification and claims, as originally filed. Specifically, support for new claims 83-88 may be found in, for example, originally filed claims 4-7 of the specification.

*No new matter has been added.* Any amendments to and/or cancellation of the claims was done solely to more particularly point out and distinctly claim the subject matter of Applicants' invention in order to expedite the prosecution of the application. Applicants reserve the right to pursue the claims as originally filed in this or a separate application(s).

**Election/Restriction**

The Examiner has required restriction to one of the following inventions under 35 U.S.C. § 121 and 372:

- I. Claims 1-9, drawn to a method for producing a B6 vitamer comprising culturing an organism with increased YaaD and/or YaaE activity;
- II. Claims 10-18, drawn to a method for producing a B6 vitamer comprising culturing an organism with increased Epd, PdxA, PdxJ, PdxF, PdxB, PdxH, and/or Dxs activity;
- III. Claim 19-33, drawn to an organism that has been genetically modified to comprise a recombinant DNA molecule that results in the increase of the activity of one or more enzymes that catalyze a step in the biosynthesis of a B6 vitamer;
- IV. Claims 34-49, drawn to a method of producing a B6 vitamer comprising culturing a microorganism that has been genetically modified to comprise a recombinant DNA molecule that results in the increase of the activity of one or more enzymes that catalyze a step in the biosynthesis of a B6 vitamer;
- V. Claims 50-61, drawn to a method of producing a B6 vitamer comprising culturing a microorganism that overexpresses at least one *Bacillus* B6 vitamer biosynthetic gene under conditions such that the B6 vitamer is produced;
- VI. Claims 62-80, drawn to a recombinant microorganism that overexpresses at least one *Bacillus* B6 vitamer biosynthetic enzyme; and

VII. Claims 81 and 82, drawn to an isolated *Bacillus* B6 vitamer biosynthetic enzyme polypeptide.

The Examiner is of the opinion that “[t]he inventions listed as Groups I-VII do not relate to a single general inventive concept”.

Applicants hereby elect, *with traverse*, Group IV (claims 34-49, and new claims 83-88) directed to methods of producing a B6 vitamer comprising culturing a microorganism that has been genetically modified to comprise a recombinant DNA molecule that results in the increase of the activity of one or more enzymes that catalyze a step in the biosynthesis of a B6 vitamer) for prosecution in the present application.

Applicants traverse the foregoing restriction requirement and submit that contrary to the Examiner’s assertion, the present invention forms a single inventive concept, this concept being a means to selectively manipulate the B6 vitamer biosynthetic pathway. In particular, Applicants submit that although Kunst, *et al.* (Accession S66041; D69736. October 28, 2996) teach the amino acid sequence of YaaD, Kunst, *et al.* fail to teach or suggest that the YaaD polypeptide is a B6 vitamer biosynthetic polypeptide. Moreover, Kunst, *et al.* fail to teach or suggest methods for producing a B6 vitamer comprising culturing a microorganism that overexpresses a *yaaD* gene that encodes such a B6 vitamer polypeptide. In support of this position, Applicants point the Examiner to the header of Kunst, *et al.* which clearly indicates that the sequence disclosed in S66041 is a ***hypothetical protein*** without known or even presumed function, let alone a B6 vitamer biosynthetic polypeptide function. Therefore, the pending claims are novel over Kunst, *et al.*

Accordingly, at least for the foregoing reasons, Applicants submit that the present invention forms a single inventive concept, *i.e.*, a means to selectively manipulate the B6 vitamer biosynthetic pathway.

Applicants reserve the right to re-introduce canceled, non-elected claims should the Examiner appreciate the merits of this traversal.

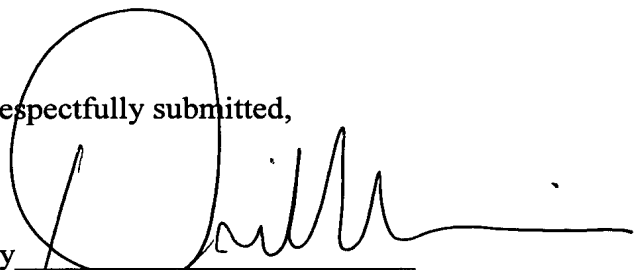
**SUMMARY**

Reconsideration and allowance of all the pending claims is respectfully requested. If a telephone conversation with Applicant's Attorney would expedite the prosecution of the above-identified application, the examiner is urged to call the undersigned at (617) 227-7400.

Applicants believe no fee is due with this Response. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. OGZ-002US, from which the undersigned is authorized to draw.

Dated: June 29, 2007

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Debra J. Milasincic', is written over a horizontal line. The signature is fluid and cursive, with a large initial 'D'.

By

Debra J. Milasincic, Esq.

Registration No. 46,931

LAHIVE & COCKFIELD, LLP

One Post Office Square

Boston, Massachusetts 02109-2127

(617) 227-7400

(617) 742-4214 (Fax)

Attorney/Agent For Applicants